



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,602	10/23/2003	Ping Huang	MR957-1408	6730
4586	7590	11/03/2005	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			MCKANE, ELIZABETH L	
			ART UNIT	PAPER NUMBER
			1744	

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/690,602

Applicant(s)

HUANG, PING

Examiner

Leigh McKane

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 22 of the claim, the phrase “at a front of the electric fan” renders the claim vague and indefinite because an apparatus cannot define itself. The Examiner suggests replacing “electric fan” with –main body--. In line 23, the phrase “at a center thereof” is confusing because it cannot be ascertained if this limitation is referring to the protecting net, the fan, or the shaft.

Claim Objections

3. Claim 1 is objected to because of the following informalities: In line 15, “the blade” should be –the fan blade—to maintain term consistency. Appropriate correction is required.

Allowable Subject Matter

4. Claims 1-3 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
5. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or suggest *inter alia* a light-catalyst equipped fan having the claimed structure in combination with two motors – one located at a rear side of the housing for

Art Unit: 1744

rotating the fan and the second located on a front side of the housing for rotating the front protecting net and the photocatalytic filter attached thereto.

KR 2004014028 teaches a photocatalytic air purifier including a first motor for fan 4f and a second motor 5 for rotating cylindrical filter 5d. However, this reference does not teach the claimed structure nor is it prior art.

Kim (US 6,913,637) and Oda (US 6,761,859) are exemplary of prior art photocatalytic air purifiers, including a fan, filter and filter cage. However, the filter cage does not rotate.

Huang (US 2005/0089452) by the instant inventor teaches a photocatalytic air purifier having a fan but the filter cage does not rotate.

Hollis et al (US 4,477,272), Rehil (US 6,398,835), Scoggins (US 4,750,863), Boulva (US 2003/0188520) all teach conventional fan cage filters.

Endo (US 2004/0025697) teaches a fan having an air cleaning filter. Like the references above, the structure of Endo differs significantly from the claimed invention and does not teach a rotating filter.

De Castella (US 4,411,675) disclose a rotor 13 which acts as both a fan and a filter. Filter 21 does not rotate.

Foreman et al (US 3,676,985) similarly employs a filter 4 which rotates on shaft 1 driven by motor 2. The filter acts as the fan and thus, there is no separate fan driven by a separate motor.

JP 2000-70347, JP 2001/6761859 both teach a conventional photocatalytic air cleaner having no rotation of the filter.

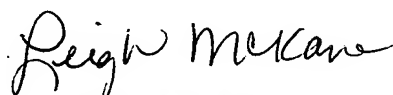
Art Unit: 1744

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh McKane whose telephone number is 571-272-1275. The examiner can normally be reached on Monday-Thursday (5:30 am-2:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Kim can be reached on 571-272-1142. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Leigh McKane
Primary Examiner
Art Unit 1744**

elm
31 October 2005